

Appl. No. 10/532,626

Am dt dated November 28, 2006

Reply to FINAL Office action of September 25, 2006

REMARKS

Claims 8-26 and 28 are now in this application.

Claims 20-24 have been withdrawn as directed to non-elected species.

Claim 16 has been amended by incorporating the limitations of independent claim 8.

Claim 28 has been added and claim 27 has been canceled. In the Office action the examiner stated that the claims lack that the bypass conduit 74 is not an outlet conduit for the control chamber. Claim 27 has been replaced by claim 28 to set forth this feature.

In regard to the examiner's rejection of claims 8-19 and 25-26, based on the prior art reference to Stoecklein et al, the following is pointed out.

First and foremost, since in Stoecklein et al conduit 52 connects chamber 44 directly to the high pressure rail, chamber 44 will always be maintained at maximum pressure, and this maximum pressure in chamber 44 will never allow fuel to flow out from control chamber 58 through conduit 62. Thus the examiner's reading of Stoecklein et al which has fuel flowing out from control chamber 58 through conduit 62 cannot be a valid reading of Stoecklein et al. It is pointed out that none of the sections of Stoecklein et al which the examiner has referred to say that fuel flows out through conduit 62. Fuel can flow from chamber 44 to chamber 78 via conduit 74, but this is not fuel which has come from control chamber 58. Fuel flowing out from chamber 58 through conduit 62, however, is an integral part of the examiner's reading of the Stoecklein et al reference in an attempt to make a rejection. Without conduit 62 being an outlet from control chamber 58, Stoecklein et al have only one outlet from control chamber 58 and that

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is outlet 66. Without a secondary, bypass outlet such as applicants' second outlet conduit 16, the reference to Stoecklein et al cannot in any way be properly read on the structure recited in applicants' claims.

In the structure disclosed in the Stoecklein et al reference, the outlet throttle 64 is located between control chamber 58 and control valve 70, and is thus upstream of the control valve 70. The downstream part 66' of the outlet conduit 66 has a greater diameter than the throttles 64 and 86. Accordingly, outlet conduit 66 does not form an outlet throttle since it does not provide any throttling function for the outlet conduit.

Further, in the intermediary and the uppermost positions of valve element 76, the valve chamber 78 is connected to high pressure via bypass conduit 74 in order to close the injection nozzle faster. There is no communication from the control chamber 58 to the valve chamber 78 via the bypass conduit 74 since the pressure in the bypass conduit 74 is always higher than the pressure in the control chamber 58 when the valve member is in its intermediary and uppermost positions. Therefore, contrary to the reading of the Stoecklein et al reference as expressed by the examiner, in the structure of Stoecklein et al bypass conduit 74 is **not** an outlet conduit for the control chamber 58.

Thus the structure recited in claim 8 differs from the structure of Stoecklein et al in that:

- claim 8 recites that the outlet throttle 8 is located downstream of the control valve 6, between the control valve 6 and the low-pressure side 7;
- claim 8 recites that the control chamber 2 communicates with the low-pressure side 7 via a

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second outlet conduit 16 having an outlet throttle 15 when the control valve 6 is in its third valve position.

Stoecklein et al does not teach, or in any way provide, this structure.

Stated in different language, the Stoecklein et al reference lacks a second conduit (16) which communicates from the control chamber to the low pressure side. In Stoecklein et al the bypass conduit 74 does not lead from the control chamber, but rather leads from the chamber 44 which is part of the supply so that when valve 70 is in its uppermost position, bypass conduit 74 supplies fuel **into** the control chamber so that the injection nozzle closes faster.

While the examiner has argued that in Stoecklein inlet conduit 62 leads to conduit 74 and thus conduit 74 could act as a second outlet conduit, this position is refuted by the fact that high pressure in chamber 44 of Stoecklein et al will always keep fuel from flowing out of control chamber 58 through conduit 62. Thus, there is no possibility of conduit 74 acting as a communication from the control chamber 58 to low pressure side 66.

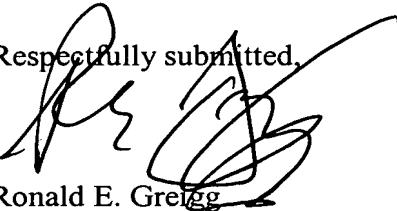
The examiner's reading of the Stoecklein reference is incorrect because, since chamber 44 of the Stoecklein reference is maintained at maximum, or rail pressure, by inlet 52, fuel can never flow out of the inlet 62 and then up conduit 74, and thus cannot make a second outlet conduit for fuel to leave chamber 58 and enter chamber 78.

Further, there is no teaching of record which would in any way make the structure recited in claim 8 obvious to one skilled in the art.

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Since the present rejection of claim 8 has been shown to be inappropriate, and thus generic claim 8 is allowable, it is proper to reinstate non-elected claims 20-24, and allow them along with allowable claim 8, on which they ultimately depend.

For the above reasons, entry of this amendment and allowance of all of the claims in this application are courteously solicited.

Respectfully submitted,

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